



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम , केरल- 695 011
(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
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Entrance Examination 2020- DM _Cardiovasc_Imaging & Vasc_ Int_ Radiology

Sl No	Question	Answer	OptionA	OptionB	OptionC	OptionD
1	Most common material used in self expanding metal stent is	C	Cobalt chromium	Alnico	Nitinol	Stainless steel
2	Which of the following is not a cause of dilated aortic root	D	Marfan syndrome	Bechet syndrome	Syphilis	Turner syndrome
3	Contraindication to TIPSS shunt include all of the following except	D	Hepatic encephalopathy	Right ventricular overload	Severe Porto-pulmonary hypertension	Severe right hydrothorax
4	Which of the following is not true regarding aortic dissection?	C	Type A aortic dissection is more common than type B dissection	Hypertension is highly associated with type A aortic dissection	Surgery is the mainstay of type B aortic dissection	Intramural hematoma is a risk factor of aortic dissection
5	Sharma criteria is used in the diagnosis of	A	Takayasu arteritis	Cardiac tamponade	Marfan syndrome	Significant renal artery stenosis
6	Opening of Buhlers collaterals is seen in diseases affecting	A	Coeliac artery	Right subclavian artery	Popliteal artery	Juxta-renal aorta
7	Which of the following has the highest risk factor for retroperitoneal hematoma post catheterization of femoral vessels?	B	Guidewire perforation of aorta	High femoral artery puncture	Low femoral artery puncture	Retrograde wire induced dissection of femoral artery
8	Most common site for stenosis in AV fistula for dialysis is at	C	Arterial site of fistula	At the level of anastomosis	Venous end close to fistula	Central vein
9	The ideal investigation modality for diagnosis of peripheral vascular disease in diabetic foot with normal serum creatinine is	A	MR angiogram	Dual energy CT angiogram	DSA	Doppler
10	Fontan procedure is done in univentricular heart . The anastomosis in such a procedure is from	C	Systemic veins to aorta	Systemic veins to left atrium	Systemic veins to pulmonary artery	Pulmonary artery to ascending aorta
11	Prospective cardiac CT acquisition has the greatest advantage in	B	Dynamic cardiac examination	Reduced radiation to patient	Faster acquisition	Relatively good imaging even in high heart rates
12	TASC guidelines are used in	B	Devising protocol in aortic aneurysm	Measuring severity of peripheral vascular disease in CT	Measuring porto-systemic gradients in chronic liver disease	Measuring severity of carotid stenosis
13	Epicardial fat-pad sign in chest radiographs is suggestive of	A	Pericardial effusion	Cardiac volvulus	Left ventricular aneurysm	Right atrial dilation
14	Regarding constrictive pericarditis which of the following is not true	C	Calcification of pericardium is highly suggestive of tuberculous etiology	Thickness of pericardium more than 4mm is suggestive of constriction	Calcification is a prerequisite to constriction of pericardium	Free breathing MR sequence can help in detecting the ventricular interactions in constrictive pericarditis
15	Which of the following is not a differential in preferential involvement of temporal lobe?	D	Herpes encephalitis	Syphilis	Limbic encephalitis	CNS lymphoma
16	Right side of mediastinal shadow is not formed by	D	SVC	Right innominate	Right atrium	Right ventricle
17	Calcification of meniscal cartilage is seen in	D	Hyperparathyroidism	Fibrous dysplasia	Acromegaly	Pseudogout
18	In a Brodie abscess, there is a layer of hyper intense T1 signal peripheral to the abscess cavity. What is the term used to describe that layer?	B	Sequestrum.	Penumbra sign.	Target appearance.	Halo sign.
19	Pseudo-scalloping cholangitis sign on imaging is a feature of	A	Extrahepatic portal vein obstruction	Hepatic arterial occlusion	Cholangiocarcinoma of bile duct	Mirizzi syndrome
20	Most common renal tumour in infants is	D	Lymphoma	Metanephric adenoma	Renal angiomyolipoma	Mesoblastic nephroma
21	Which of the following tumour crosses the joint space	B	Osteoid osteoma	Giant cell tumour of bone	Osteochondroma	Ewing's sarcoma
22	All of the following increases signal to noise ratio in MR imaging except	D	Larger voxel size	Increasing NEX	Longer TR	Decreased slice thickness
23	All are true regarding Osteochondritis dissecans except	A	Osteochondritis dissecans affects people who are more than 50 years of age.	It is more common in males	A linear defect in the articular cartilage is best seen in fast suppressed T2W images	The lesion most commonly involves the lateral aspect of the medial femoral condyle
24	Peri lymphatic nodules in lung is seen in	D	Sarcoidosis	Silicosis	Lymphangitis carcinomatosa	All of the above
25	Pulmonary artery wedge pressure is a measure of	C	Pulmonary arterial pressure	Left ventricular pressure	Left atrial pressure	None of the above
26	Angiosome based revascularisation theory is better applied in	B	Femoral artery angioplasty	Infrapopliteal angioplasty	Renal angioplasty	Inferior mesenteric vessel bypass
27	The ideal position of IVC filter is	A	Infrarenal IVC	Juxta renal IVC	Suprarenal IVC	Intrahepatic IVC
28	Indentation of anterior oesophageal wall is produced by	A	Pulmonary artery sling	Aberrant right subclavian artery	Double aortic arch	All of the above

29	Which of the following vascular anomaly of brain usually doesn't require treatment ?	D	Pial AVM	Dural AVM	AV fistula	Venous angioma
30	Which of the following is/are common complication(s) of pulmonary AVM	A	Haemoptysis	Pulmonary artery hypertension	Lung abscess	All of the above
31	Bicuspid aortic valve is associated with	D	Aortic stenosis	Aortic regurgitation	Aortic aneurysm	All of the above
32	Which of the following is a liquid embolization agent	A	NBCA	Tantalum	Embosphere	All of the above
33	Vascular groove sign in CT is seen in	C	Osteoblastoma	Chondrosarcoma	Osteoid osteoma	Ewing's sarcoma
34	Which of the following technique is preferred in arterial imaging in non-contrast MR angiogram of brain	B	2D TOF	3D TOF	QISS	TRANCE
35	MRI of a young woman shows swelling and T2 prolongation of the bilateral thalami and basal ganglia, consistent with infarction. Which of the following venous structures is probably thrombosed?	D	Superior sagittal sinus	Inferior sagittal sinus	Labbes vein	Internal cerebral vein
36	Sonography of a nontender, palpable testicular mass in a young adult man shows a well circumscribed mass in the testis with alternating hyperechoic and hypochoic rings. Which of the following is the most likely diagnosis?	C	Seminoma	Lymphoma	Epidermoid cyst	Adematoid tumor
37	Regarding a percutaneous biliary intervention procedure which is false;	B	Balloon dilatation is a good therapeutic option for stricture of biliary anastomosis	Metallic stents are routinely used for benign biliary stricture	Gross ascites is a contraindication	Ring biliary catheter is an internal external drainage catheter
38	20 year old man presents with dyspnoea. Chest radiograph reveals a right sided hyperlucent lung. Expiratory film reveals air trapping . CT reveals a small pulmonary artery right . The most likely diagnosis is	B	Pulmonary hypoplasia	Sweyer-james syndrome	Poland syndrome	Scientia's syndrome
39	Most common site of thoracic aorta involved in blunt high velocity trauma is	B	Aortic root	Aorta at level of isthmus	6 cm below the level of isthmus	At the level of diaphragmatic hiatus
40	A 48-year-old man presents with diplopia and occipital headache of 3 months' duration. MRI shows the tumour to be hypointense on T1 images and heterogeneously hyperintense on T2 images with prominent enhancement. Histopathology reveals numerous vacuolated cells. What is the most likely diagnosis?	A	Chordoma	Chondrosarcoma	Metastasis	Paraganglioma
41	All the following statements regarding renal lymphomas are true except	B	Majority are secondary	Lymphomas arise from intrarenal lymphatics	Lesions are hypointense relative to renal cortex on T1W images	Non Hodgkin's lymphoma are more common than Hodgkin's
42	The kVP of digital chest radiographs is in the range of	D	80kVp	90kVp	100kVp	120kVp
43	Which of the following statements regarding SARS- Covid 19 is false?	D	SARS cannot be confidently diagnosed with a single test.	The chest radiograph (CXR) findings are often indistinguishable from other causes of atypical pneumonia.	The right lung is more commonly affected than the left.	Calcification, cavitation, pleural effusions and lymphadenopathy are common findings in the paediatric population.
44	Are the following statements regarding pericardial defects true?	C	They are more common on the right side.	Lateral view is not useful.	They may cause difficult visualisation of the right heart border.	They require no intervention.
45	In the mediastinum identify which is false?	A	The transverse sinus of the pericardium is situated anterior to the ascending aortic root.	In the anomalous innominate artery compression syndrome, the anterior wall of the trachea is indented by the right brachiocephalic artery.	Further investigations are required in patients with a right-sided aortic arch and mirror branch imaging.	The right atrium typically enlarges in a posterior direction.
46	Regarding "Luftsichel sign "– true statement is	C	Left-superior lucency is due to herniation of right upper lobe across sternum	Lingula contribute to a border of the lucency	Most common cause is SCC	Lucency in Luftsichel sign extend till pleural margin
47	Find the true statement regarding the venous anatomy of the chest?	D	The accessory hemiazygos system drains into the hemiazygos system at T12.	The coronary sinus opens into the left atrium.	The internal thoracic (mammary) veins drain into the superior aspect of the brachiocephalic veins.	The great cardiac vein ascends in the anterior interventricular groove.ir & Abrahams'
48	Find true statement regarding CO2 angiography is true?	C	The CO2 cylinder can be connected directly to the patient via a safety valve.	CO2 can be used for brachial arteriography.	CO2 venography is contraindicated in patients with right-to-left cardiac shunts.	CO2 angiography tends to overestimate vessel size
49	Which of the following is not a recognised cause of cardiomegaly?	B	Uhl's disease.	Falot's tetralogy.	Tricuspid atresia.	Ebstein's anomaly.

50	Are the following statements regarding deep vein thrombosis (DVT) true except ?	D	Tamoxifen is a risk factor.	Venograms are falsely negative in approximately 10% of cases	Bilateral negative venograms may sometimes be seen with proved pulmonary emboli.	Venous diameter twice that of the artery suggests old established clot.
51	The true secondary sign on MRI which help in the diagnosis of an anterior cruciate ligament tear is	B	Avulsion fracture of the posterior tibial eminence.	Buckled posterior cruciate ligament (PCL).	Uncovering of medial meniscus	Bone bruise in the anterior tibial plateau
52	Which one of the following is the most likely MRI finding of hypertrophic cardiomyopathy?	D	Dilated left ventricle	Mitral regurgitation	Reduced cardiac contractility	Systolic anterior motion of the mitral valve
53	A neonate is diagnosed with congenital tracheoesophageal (TE) fistula. A plain film demonstrates a gasless abdomen. Which type of TE fistula is associated with this finding?	A	Type B	Type C	Type D	Type E
54	In a patient with malabsorption, small bowel meal shows dilatation of the proximal small bowel loops but a normal mucosal fold pattern. Which one of the following is the most likely underlying diagnosis?	A	Coeliac disease	Eosinophilic gastroenteritis	Whipple disease	Giardiasis
55	False regarding Castleman's disease is?	B	It typically occurs in the young	CT demonstrates nodal mass with uniform enhancement following intravenous contrast	Nodal calcification is a feature	Lymph nodes frequently cavitate
56	A chylothous pleural effusion will occur in the following except	C	Hodgkin's disease involving mediastinum	Post Fontan surgery	Scleroderma	Filariasis
57	Expiratory HRCT of the thorax may be useful in all of the following conditions except	A	Langerhans' cell histiocytosis	Bronchiolitis obliterans	Bronchial asthma	Sarcoidosis
58	Which of the following is FALSE regarding trauma to the gastrointestinal tract?	B	Acutely clotted blood within the abdomen typically has CT attenuation values of 50-60 Hounsfield units (HU)	The terminal ileum is the most common site of bowel laceration	A small hypodense spleen is a feature of haemorrhagic shock	Interloop fluid of water density on CT is a useful sign of bowel perforation
59	Which of the following is false regarding fibrolamellar hepatocellular carcinoma?	A	The majority are associated with elevated alpha-fetoprotein	A central scar is present in 50% of cases on ultrasonography	Calcification is usually seen on CT	There is arterial phase enhancement of the tumour following intravenous gadolinium on MRI
60	Which of the following liver lesions may demonstrate signal loss on out-of-phase (opposed phase) MRI?	D	Haemangioma	Cholangiocarcinoma	Lymphoma	Hepatocellular adenoma
61	Dilatation of second part of duodenum is seen in all except	D	Henoch-Schönlein Purpura	Acute pancreatitis	Mongolism	Biliary Atresia
62	In hydatid disease, which of the following is true?	B	Peritoneal seeding occurs in a large proportion of liver hydatid disease	Calcification is seen radiographically in 30% of cases with liver involvement	Hepatic hydatid cysts typically have a high signal rim on T2-weighted MRI	Rupture of the hepatic cysts occurs in 10% of cases
63	Regarding carcinoid tumour of the gastrointestinal tract, which of the following is false?	A	Multiple lesions are rare	Metastases from carcinoid of the appendix are rare	Low-density lymphadenopathy is a feature on CT	One third of patients have a second malignancy
64	Regarding the anatomy and development of the renal tract and adrenal gland, which of the following is false?	B	The adult kidney is formed directly from the metanephros	The posterior urethra in men is formed by the prostatic and bulbous segments	There are usually three adrenal arteries and one adrenal vein bilaterally	The bladder develops from the cloaca
65	Which of the following is FALSE of renal neoplasms?	C	Oncocytomas can be confidently differentiated from renal cell carcinoma on imaging	Calcification is seen in 15% of oncocytomas	Juxtaglomerular cell tumours (reninomas) are typically vascular tumours	Metastases are the most common malignant tumour of the kidney
66	Which one of the following statements is true regarding the radiographic appearance of lung metastases?	B	Calcification is commonly seen in lung metastases	Cavitation is most commonly seen in squamous cell carcinoma metastases	They are usually central in distribution	They are usually irregular in shape and ill defined
67	Which of the following statements is false regarding osteomalacia?	B	Looser's zones show increased uptake on radionuclide bone scan	Looser's zones are most commonly seen along the medial border of the humeral neck	There is an association with neurofibromatosis.	It causes loss of the lamina dura of the teeth
68	Which of the following is cause for atlanto-axial subluxation?	B	Ehlers-Danlos syndrome	Marfan's syndrome	Achondroplasia	Turner's syndrome

69	Which of the following regarding bone marrow imaging is false ?	B	Marrow infiltration is usually best detected on T1-weighted images	Reconversion of yellow marrow to red marrow proceeds from the peripheral to the axial skeleton	MRI abnormality in myelofibrosis is typically patchy in distribution	Chemical shift imaging is useful in detecting marrow infiltration
70	Following are true of right aberrant subclavian artery except	B	Usually asymptomatic	Goes between trachea and oesophagus	May be diagnosed on a barium swallow	Arises distal to left subclavian artery
71	Concerning neuronal migration disorders, which of the following is false ?	A	In Schizencephaly the cleft is lined by mature white matter	The septum pellucidum is absent in 90% of cases of Schizencephaly	Nodular heterotopias do not enhance and are isointense to cortical grey matter	Polymicrogyria is most common around the sylvian fissure
72	Regarding transjugular intrahepatic porto-systemic shunts (TIPS), which of the following is false?	A	The aim is to produce a porto-systemic shunt gradient of approximately 5 mm Hg	Embolisation of varices can be performed as part of the procedure	Right-sided heart failure is a relative contraindication	Ultrasound is accurate in the assessment of shunt patency
73	Regarding Doppler ultrasound of peripheral arteries, which of the following is false?	D	Triphasic blood flow in a normal artery implies a high-resistance distal vascular bed	Power Doppler is independent of the angle of the incident ultrasound waves on the vessel	Resistive index is calculated from the maximum systolic velocity minus the maximum end diastolic velocity divided by the maximum systolic velocity	In the majority of patients, the internal carotid artery (ICA) is postero-medial to the external carotid artery (ECA)
74	Central cyanosis is feature in all except	D	Complete transposition of great vessels	Falot's tetralogy	Tricuspid atresia	Coronary artery fistula
75	Regarding the Dandy-Walker malformation, which of the following is false?	C	The posterior fossa is enlarged	The floor of the fourth ventricle is present	The vermian remnant is inferiorly displaced	Obstructive hydrocephalus occurs in about 80% of cases
76	Posterior vertebral scalloping is absent in?	D	Ankylosing spondylitis	Hurler's syndrome	Achondroplasia	Hypothyroidism
77	Concerning the Sturge-Weber syndrome, which of the following is false?	C	The cutaneous lesion is most common in the distribution of the ophthalmic nerve	The cortical abnormalities are usually on same side of the cutaneous lesion	Ipsilateral choroid plexus atrophy is common	It is associated with Klippel-Trenaunay syndrome
78	Calcification of the basal ganglia is NOT seen in?	B	Hypoparathyroidism	Hyperthyroidism	Fahr's disease	Cockayne's syndrome
79	Which of the following is false regarding herpes simplex encephalitis (HSE)?	C	It is the most common nonepidemic cause of viral encephalitis	In neonates, it is usually caused by herpes simplex virus type 2 (HSV-2)	Adult infection classically affects the limbic system bilaterally and symmetrically	The basal ganglia tend to be spared in adult HSE
80	Diffuse peripheral thickening of coronary arteries is seen in which of the following conditions	B	Fibromuscular dysplasia	IgG4 disease	Coronary dissection	Kawasaki disease
81	Regarding Doppler ultrasound of peripheral arteries, which of the following is false?	D	Triphasic blood flow in a normal artery implies a high-resistance distal vascular bed	Power Doppler is independent of the angle of the incident ultrasound waves on the vessel	The resistive index is calculated from the maximum systolic velocity minus the maximum end diastolic velocity divided by the maximum systolic velocity	In the majority of patients, the internal carotid artery (ICA) is postero-medial to the external carotid artery (ECA)
82	Regarding fibromuscular dysplasia (FMD), which of the following is false?	B	It characteristically affects the mid and distal main renal artery	It most commonly affects the vessel intima	Renal FMD is usually bilateral	Transluminal angioplasty has a high long-term success rate in renal FMD
83	Mid myocardial enhancement in myocardium in late gadolinium sequence is noted in	B	Ischemic heart disease	Dilated cardiomyopathy	Fabry disease	Sarcoidosis
84	Regarding congenital lobar emphysema, which of the following is false ?	A	Insertion of a chest drain is often curative	It may present with complete opacification of the affected lobe	The left upper lobe is most frequently affected	It is associated with congenital heart disease
85	Features not found in rickets is?	A	A sclerotic rim around the epiphysis	A metaphyseal spur projecting at right angles to the long axis of the bone	Coarse trabeculation	Craniotabes
86	The following are the features of pulmonary venous hypertension except	D	Pleural effusion	Kerley lines	Air trapping in children	Distended azygos vein
87	In Pneumocystis pneumonia complicating immunosuppressive therapy the following is true	A	It is usually perihilar in distribution	Sputum is diagnostic	It is usually unilateral	No suitable antibiotic treatment
88	The following are associated with aortic regurgitation except	D	Ankylosis Spondylitis	Marfan's syndrome	Takayashu's arteritis	Idiopathic hypercalcemia
89	Dilated ureters are a recognized feature of all except	A	Tuberous sclerosis	Prune belly syndrome	Chaga's disease	Posterior urethral valve
90	Rib notching is seen in all except	B	Coarctation of aorta	PDA	Following Blalock-Tausig shunt	Pulmonary valve stenosis

91	Nephrocalcinosis is commonly seen in all except	D	Renal tubular acidosis	Medullaary sponge kidney	Hyperparathyroidism	Chronic glomerulo nephritis
92	Regarding Popliteal entrapment syndrome all are true except	B	Can be bilateral	Arteriogram shows lateral deviation of popliteal artery	Posterior tibial artery Doppler waveform diminished during active Muscle contractions	Slowly progressive unilateral claudication
93	In Down's syndrome there is an increased incidence of following except	B	Atlantoaxial dislocation	Large Acetabular angle and iliac index	Clinodactyly	Underdevelopment of teeth.
94	Dilated air filled oesophagus may be seen in	D	Epidemolysis Bullosa	Cystic Fibrosis	Rubella syndrome	Scleroderma
95	In arteriovenous malformation of lung the following are true except	B	Valsalva manoeuvre reduces the size	Common in upper lobes	They may calcify	Associated with GI telangiectasia
96	Which is NOT true in the following associations	D	Hemihypertrophy and Wilms' tumour	Secondary polycythaemia and hydronephrosis	Single umbilical arteries and congenital anomalies	Hurles' syndrome and coxa vara
97	Increased skull markings of meningeal vessels is found in	D	Vein of Galen aneurysm	Hypoparathyroidism	Arteritis Obliterans	Para sagittal meningioma
98	The following are true of mitral valve prolapse except	D	Associated with Marfan's syndrome	Usually benign	Associated with Ehlers-Danlos syndrome	More common in males
99	In Kienbock's disease which of the bone is radiologically dense and deformed	B	Scaphoid	Lunate	Triquetrum	1st Metacarpal
100	Following are the features of Hurler's syndrome except	A	CoxaVara	J shaped Sella	Hepatosplenomegaly	Hand abnormalities are more than that of feet